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Tennessee Valley Authority

Executive Summary

Draft Environmental Impact Statement

Red Hills Power Project

February 1998

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PROPOSED PURCHASE OF ELECTRICITY GENERATED BY THE RED HILLS POWER PROJECT

Responsible Federal Agency: Tennessee Valley Authority (TVA)

Cooperating Federal Agency: U.S. Army Corps of Engineers (COE)

Abstract: TVA proposes to purchase 440 megawatts (MW) of electrical energy from the Red Hills Power Project (RHPP). This energy would be provided from a proposed 440-MW (approximate capacity) lignite-fueled generation facility (Red Hills Generation Facility) and a proposed surface lignite mine (Red Hills Lignite Mine) located near the Town of Ackerman in Choctaw County, Mississippi. Choctaw Generation, Inc., proposes to build the generation facility and Mississippi Lignite Mining Company proposes to operate the lignite mine.

TVA and the COE cooperated in preparing this Environmental Impact Statement (EIS). The purpose of this EIS is to evaluate the environmental impacts of the proposed TVA purchase of electricity generated by the Red Hills Power Project (RHPP) and the COE permitting of wetlands and waters of the U.S. for the project.

The RHPP would consist of a surface lignite mine and a lignite-fueled generation facility near the Town of Ackerman in Choctaw County, Mississippi. Associated project components include water supply and disposal systems, a natural gas supply pipeline, and transmission line connections. Choctaw County and the state of Mississippi also propose to develop the Red Hills EcoPlex industrial park adjacent to the proposed generation facility. Although the EcoPlex is not part of the actions under consideration by TVA and the COE, potential cumulative impacts resulting from development of the EcoPlex are assessed.

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Date and Place of Public Meeting: March 12, 1998, at Ackerman High School

Date by which comments must be received: March 30, 1998

EXECUTIVE SUMMARY

Introduction

The Red Hills Power Project (RHPP) consists of the Red Hills Generation Facility (RHGF), the Red Hills Lignite Mine (RHLM), and associated project components. A location map and an organization chart of the RHPP are shown in Figures 1 and 2, respectively. The proposed generation facility would be owned and operated by Choctaw Generation, Inc. (CGI), headquartered in Ackerman, Mississippi. CGI is a subsidiary of Tractebel Power, Inc. (TPI, formerly known as CRSS Inc.), which is based in Houston, Texas. TPI is a wholly owned subsidiary of Tractebel S.A., which is headquartered in Brussels, Belgium. The proposed mine would be owned and operated by Mississippi Lignite Mining Company (MLMC), a joint venture of Phillips Coal Company (PCC) and The North American Coal Corporation (NAC), with headquarters in Ackerman, Mississippi. A subsidiary of Phillips Petroleum Company, PCC has headquarters in Richardson, Texas. NAC, based in Dallas, Texas, is a subsidiary of NACCO Industries, Inc.

Figure 1. Location of Red Hills Power Project

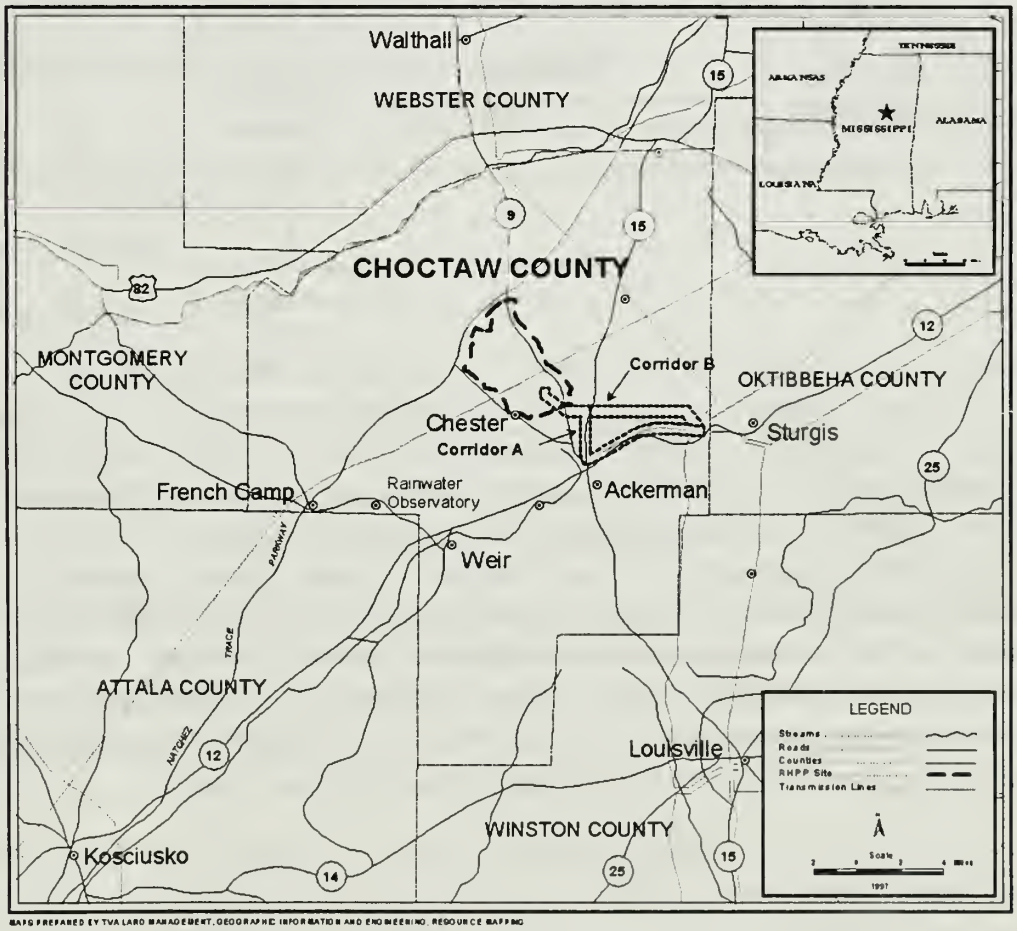
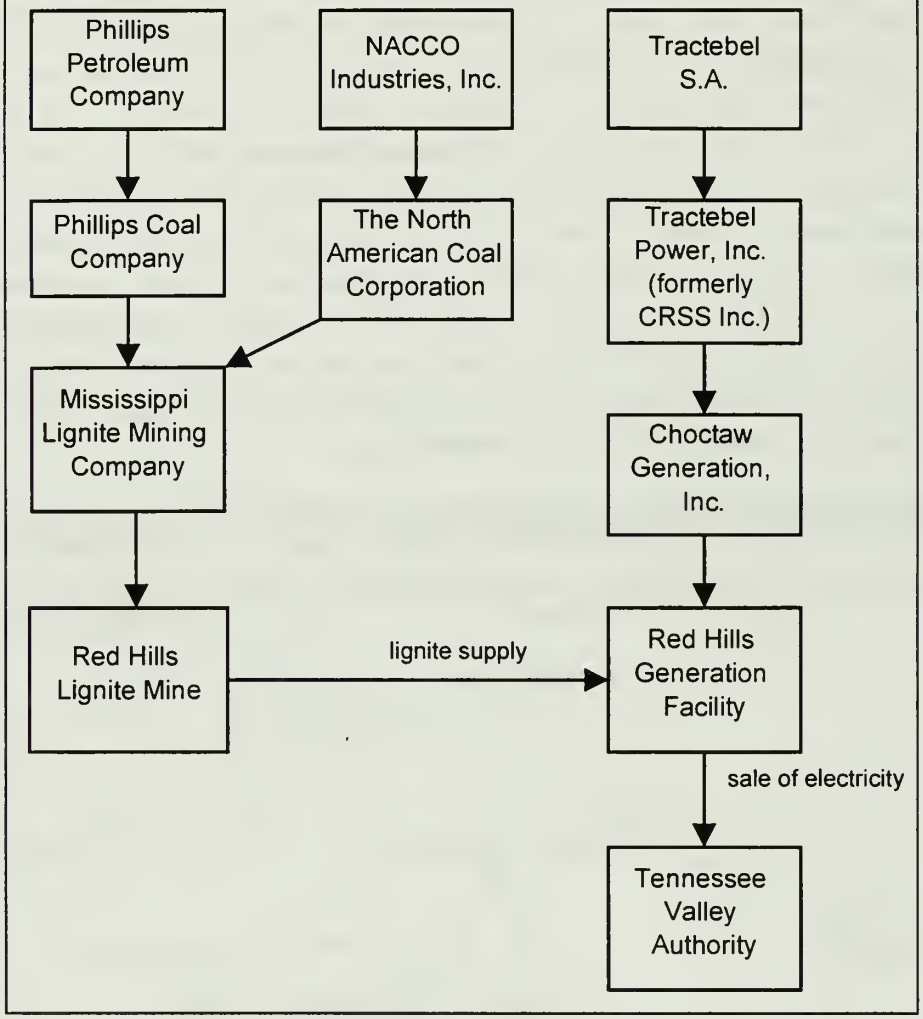


Figure 2. RHPP Organization Chart



The principal parties involved in the RHPP are Choctaw Generation, Inc. (CGI) and Mississippi Lignite Mining Company (MLMC). Both parties are essentially private applicants to TVA and, as such, are responsible for the design of various project components and the siting of those components. TVA has little or no control over project-related decisions made or proposed by CGI or MLMC. Its control is largely limited to deciding whether to purchase power from the proposed facility and how to connect the facility to the TVA power distribution system. Some of the project components fall under COE's regulatory jurisdiction for wetlands and other waters of the U.S. The COE can require that certain potential impacts be avoided or mitigated through Section 404 of the Clean Water Act.

Overview

TVA evaluated future demands for electricity in its power service area and methods for meeting this demand in its *Energy Vision 2020–Integrated Resource Plan/Environmental Impact Statement*, published in 1995. TVA's adopted method is a combination of customer service option, such as conservation and beneficial electrification, and supply-side options, such as upgrading existing facilities, purchasing and exercising call options, and purchasing power from independent power producers. TVA's proposed action evaluated here would be the purchase of power from an independent power producer.

The purpose of TVA's proposed action to purchase electricity generated by the RHPP is to provide a source of power to meet the growing demand for power by electricity users in the TVA region. The purpose of the COE's action is to respond to requests for its approval to issue the required permits.

TVA proposes to purchase the electricity generated by the RHPP and to construct a new transmission line connecting the generation facility to TVA's electrical distribution system. The purchase of electricity by TVA would result in the construction and operation of both the Red Hills Generation Facility (RHGF) and the Red Hills Lignite Mine (RHLM), as well as the environmental impacts associated with these activities.

Description of Primary Components of RHPP

The primary components of the RHPP are a generation facility, a mine, a transmission line, and a natural gas pipeline. Each of these components are described in detail in the following sections.

Generation Facility

Combustion Boiler

The RHGF would use two circulating fluidized bed (CFB) boilers feeding a single steam turbine with a net output of 440 megawatts (MW) (500 MW gross) of electricity. In a CFB combustion system, lignite and limestone are both injected into the combustion chamber, where they are burned in a "bed" held in a fluid state by upward jets of hot air. The calcium in the limestone combines with sulfur gases emitted by the burning lignite, resulting in an ash that contains the sulfur compounds.

CFB boilers also offer high flexibility in handling fuels of varying volatiles content, surface moisture, and heating content. Because of their relatively low combustion temperature, NOx emissions and ash deposits and slagging within the boiler are low compared to traditional pulverized coal boilers. Use of CFB boilers also eliminate the need for SO_2 removal by wet flue-gas scrubbers and are a clean-coal technology.

The RHGF would also be designed to be co-fired with wood waste for up to 5% of the maximum boiler heat input. Typical fuel consumption rates would be 424 tons/hour (3 million tons/year) of lignite and 35 tons/hour (245,000 tons/year) of wood waste. About 34 tons/hour (235,000 tons/year) of limestone would be used as a sorbant. All of the lignite would be supplied by the adjacent RHLM. Wood waste

would be trucked to the site from local sources and the limestone would be trucked to the site, at the rate of about 175 trucks/week, from existing quarries in the region.

Cooling System

The RHGF would use a wet mechanical draft cooling system. This system pumps cooling water through the steam condenser, where it is heated, to the top of the cooling tower, where it then falls to the bottom of the tower to be collected and pumped back to the condenser. Large fans maintain a continuous upward draft through the tower, and the heated water is cooled by evaporation as it falls through the draft in the tower. This system operates efficiently in a wide range of weather conditions and requires little land besides that occupied by the cooling tower.

Water Supply System

The generation facility would require a continuous source of 4,600 gallons/minute (6.33 million gallons/day) of raw water to replace cooling tower evaporation and for other facility uses. The potential of groundwater aquifers at different depths to meet the facility raw water supply needs was evaluated on the basis of aquifer depth, recharge rate, and water quality. Based on available groundwater information, as well as results from a test well, CGI proposes to supply the facility with water pumped from three wells in the Massive Sand aquifer of the Tuscaloosa Aquifer System at depth of about 3,000 feet.

Wastewater Handling System

The RHGF would operate as a zero-discharge system. This method would use a system such as a water softener, reverse osmosis, or evaporator to remove silica and dissolved salts from cooling tower blowdown water. The treated water would be returned to the cooling water system and the remaining salts and other solids would be disposed of in an approved offsite landfill.

Lignite Mine

Mine Development Activities

Prior to the actual removal of lignite, several mine development activities would occur. Access roads and support facilities including office, shop, and warehouse buildings would be constructed. A lignite handling facility, where lignite is transferred from the mine to the RHGF, would be built. Several water control structures, including sedimentation ponds and stream diversions, would also be built.

Mining

Nine seams of lignite occur in the Red Hills area. Based on their thickness and layering, the composition of the overburden, and the energy content of the lignite, surface mining was determined by MLMC to be the only practical mining method. Only six seams can be economically mined. Surface mining would also maximize the resource recovery and, consequently, the royalties to landowners.

Each area to be mined would first be cleared of vegetation and any buildings. Lignite would be mined from a series of successive, rectangular pits averaging 127 acres of surface area, gradually moving from the south to the north. The RHLM would use a combination of overburden removal techniques. Diesel- or electric-powered shovels would remove overburden above the uppermost lignite seam and load it into large dump trucks, which would haul it from the area. Large dozers would remove overburden from the next three seams by pushing it into the adjacent mine pit. A dragline with a bucket capacity of 79 yd^3 would then be used to remove overburden from the lowest two lignite seams. This electric-powered dragline would operate from one of the lower benches within the mine pit.

Following overburden removal from each seam, dozers fitted with ripper attachments would rip the exposed lignite seam. A diesel-powered hydraulic backhoe would then remove the lignite and dump it into large capacity dump trucks which would haul it from the pit to the mine-generation facility lignite transfer point.

Reclamation

Overburden Replacement Methods – Rough backfilling and grading operations for overburden replacement in the mined-out pits would be conducted. Final backfilling and grading operations would be accomplished. The selected overburden materials would be replaced in a manner that would prevent excessive compaction and achieve an approximate uniform stable thickness of no less than four feet of material, consistent with the proposed postmining land uses, and original contours and drainage patterns.

Topsoil Substitution – Topsoil substitution consists of removing selected overburden materials and spreading them over the area being reclaimed, as discussed in the backfilling and grading operations. Based on a comparison of available native soils data and available overburden data, this reconstructed soil is anticipated to be of comparable or higher quality than existing native soils. MLMC proposes to use selected overburden material in the top four feet as the topsoil substitution at RHLM.

Description of Other Project Components

Transmission Lines

In order to connect the proposed generation facility to TVA's existing electrical transmission system, TVA would build a double-circuit, 161-kV transmission line from the proposed facility to TVA's existing Sturgis, Mississippi, 161-kV substation. TVA would also expand the switchyard facilities in the existing Sturgis substation to accommodate the new 161-kV transmission line.

TVA uses several criteria in selecting potential transmission line corridors. Efforts are made to follow existing linear features such as railroads, pipelines, and other transmission lines, and to avoid or minimize crossing streams, wetlands, and large forested tracts. To the extent practical, routes are also selected to avoid areas of incompatible land uses and to maintain minimum distances of 300 feet from homes and 1,000 feet from schools. Using these siting criteria, TVA identified two alternative corridors, A and B, for the transmission line shown on Figure 1. The corridors are 10.3 and 10.9 miles long, and

overlap at their western ends. For study purposes, each of these corridors would be 2,000 feet wide. The width of the final right-of-way (ROW) within the corridors would vary between 100 and 175 feet. In order to supply electricity to the mine, 4-County Electric Power Association (the local electrical distributor) would build a new substation near their existing Ackerman substation and a 69-kV transmission line from the new substation to the mine office area. This line would be about six miles long and mostly within the existing transmission line ROW.

Natural Gas Pipeline

The proposed generation facility would require up to 19,000 standard cubic feet per minute (1,150 million Btu/hour) of natural gas during startup of the main lignite-fueled boiler units and to heat the auxiliary boilers when the main units are shut down or operating at low loads. An additional amount of natural gas could also be required by EcoPlex tenants. These gas needs would be supplied by a single eight-inch pipeline built and operated by the Town of Weir. The pipeline would be built within Corridor A shown on Figure 1.

Construction and Operation Schedule

Generation Facility

Construction activities of the generation facility would begin in the fall of 1998 and continue through 2000. Electrical generation would begin during the last quarter of 2000.

Lignite Mine

Mine area development activities would begin in late 1998. The actual mining of lignite would begin in mid-2000, in tandem with electrical generation by the RHGF.

No Action Alternative

Under the No Action Alternative, TVA would not purchase electrical power generated by the RHPP. TVA would also not construct a transmission line connecting the generation facility to the TVA power distribution system. Any environmental impacts associated with TVA's purchase of this electrical power from RHPP would not occur. In order to meet its anticipated power demands, TVA would consider other energy resource options assessed in *Energy Vision 2020–Integrated Resource Plan/Environmental Impact Statement*, completed by TVA in 1995. However, TVA's decision not to purchase electricity from this project would not preclude development of the mine and/or generation facility. If TVA does not buy the power, the energy developed through this project could be sold to another purchaser and lignite could still be mined. Thus, the potential impacts identified in the Action Alternatives may not necessarily be avoided by TVA's No Action Alternative.

EcoPlex

Choctaw County, with assistance from the state of Mississippi, plans to develop the Red Hills EcoPlex industrial park near the generation facility. The EcoPlex would combine various manufacturing businesses at a common location to help achieve the highest levels of efficiency in terms of energy consumption and joint feedstock/waste utilization. Industries locating in the EcoPlex would use steam, carbon dioxide, and/or ash from the generation facility, as well as byproducts from other EcoPlex tenants in their manufacturing processes. The Red Hills area was chosen for EcoPlex development because of the opportunities to leverage the planned generation facility project into a larger development opportunity for Choctaw County and the surrounding region.

When fully occupied by tenants, the proposed EcoPlex industrial park area would be about 1,500 acres in size. About 500 acres would be available during the initial development phases. About 1,000 acres are expected to be developed.

Based on the results of a Master Plan prepared for the state of Mississippi in 1997 by Mississippi Energy Consultants, with the assistance of Arthur Andersen, the industries listed below are being recruited as early tenants of the EcoPlex.

- Greenhouse – Two types of greenhouse operations are likely EcoPlex tenants. One type is hydroponic gardening, also known as controlled-environment agriculture. This operation would grow high-value crops such as tomatoes, lettuce, cucumbers, and herbs, with the plant roots suspended in a liquid nutrient solution or in a synthetic soil substitute such as perlite. The other type is a more traditional greenhouse operation, growing potted ornamental indoor plants, flowers, and vegetable seedlings. Both greenhouse types could use carbon dioxide from the generation facility exhaust stack to stimulate plant growth and could use steam from the facility for winter heating. Three separate greenhouse operations are planned for the EcoPlex.
- Aquaculture – This operation would raise fish, most likely tilapia, in enclosed tanks heated by steam from the facility. Tilapia are members of the perch family native to Africa. The aquaculture operation would be integrated with the hydroponic gardening operation and water would circulate through the tanks of the two operations. The aquaculture operation would likely cover at least two acres and raise at least 560,000 lbs of fish per year. Other species which could potentially be raised in this aquaculture operation are catfish, freshwater shrimp, crappie, and hybrid bream. Three aquaculture operations are planned for the EcoPlex.
- Kenaf Pulp Mill – This operation would process pulp from kenaf. Kenaf is an annual plant native to east-central Africa, closely related to cotton and okra, and easily cultivated in Mississippi. A kenaf pulping operation would likely use a zero effluent thermo-mechanical process because of the water supply and discharge limitations of the Red Hills area. A likely end use of the kenaf pulp is manufacturing fiberboard panels. Other potential end products include particleboard panels and paper. The pulping operation would likely use steam from the facility. One kenaf mill is planned for the EcoPlex.

Affected Environment

The Red Hills Power Project facilities and structures would be located on a 9,300-acre site in Choctaw County, Mississippi. Pertinent information about environmental resources located in or near the site expected to be affected are summarized in Table 1.

Table 1 Affected Environment

RESOURCE	EXPLANATION
Air Resources	Area in attainment for all criteria pollutants; regional air quality generally good; ozone concentrations meet the new eight-hour standard. Closest significant source beyond 30 miles. Tendency for air stagnation in summer and early fall.
Geology	Site lies entirely in the Wilcox Group. Clay, silt, sand, and lignite deposits are predominant; overburden generally non-acidic (oxidized samples contain no pyritic sulfur); iron ore is too deep and discontinuous to mine; clay deposits are mostly impure; sand is abundant. Low regional seismic hazard.
Soils	72% of area is upland soils, mostly forested. Bottomland soils comprise 28% and include 2,765 acres of prime farmland soils, very small acreages are cropped. Only 0.8% are hydric soils. Soils are strongly acidic. Heavy metal concentrations are low.
Groundwater	Area drinking water primarily from Lower Wilcox Aquifer wells; availability is moderate; water quality generally meets water quality standards. The second major source is the Tuscaloosa Aquifer System (TAS), which is deeper, has poorer water quality, and lower zones that are not used for drinking water.
Surface Water	Surface waters include Big Bywy Ditch, Little Bywy Creek, Middle Bywy Creek, Stewart Creek, Besa Chitto Creek, and several ponds, a few are used for stock watering. No permitted consumptive uses. Characterized by low total dissolved solids and neutral pH. All water quality standards are met, except occasional low pH values.
Aquatic Ecology	Area surface waters support diverse insect, crayfish, mussel, and fish communities and are typical of the area.
Wetlands	Area of wetlands historically reduced by channelization. 0.8% (67 acres) of the RHPP area is wetlands; additional wetlands occur in the utility corridors. Predominant wetland types are palustrine forested and palustrine emergent found near upland seepages and old stream channels.
Floodplains	Site mostly upland with narrow floodplains. No local floodplain regulations.
Terrestrial Ecology	Site within Oak-Pine Forest Region; no virgin or old growth forest present. Hardwoods, pines, recent clear-cuts, and crop/hay/pastureland predominate. Diverse plant and wildlife communities. A few uncommon plant communities on the site. Two state natural areas near transmission line corridors.
Threatened or Endangered Species	No federally-listed threatened plant or animal species present in project area; seven state-listed plants present on the site. One state-listed fish, the chestnut lamprey, was found downstream of site.
Land Use	9,300-acre study area is largely undeveloped. Land use is primarily forest (about 7,600 acres) including sawtimber hardwoods and loblolly pines; about 1,200 acres are in pasture/grass/hay. Land use in the utility corridors similar. Current value of timber on RHPP site and utility corridors averages $650/acre. Approximately 166 residences are located in the study area.
Cultural Resources	Site close to historic Natchez Trace Parkway. 54 archeological sites present on the first five-year mine area. Seven sites (five historic, two prehistoric) to be tested for eligibility for the National Register of Historic Places.

Table 1 Affected Environment

RESOURCE	EXPLANATION
Socioeconomic	Area population growth rate is considerably slower than the State. Jobs predominantly blue collar, with majority in government and manufacturing. Adequate community/municipal services and housing.
Environmental Justice	The proportion of minority, lower income, and aged population are all less in the project area than in Choctaw County and/or in the State.
Transportation	Nearest railroad and airport are in Ackerman, five miles from the site. Six airports are within a 110-mile radius. The site is crossed by several gravel roads and three paved roads. Several state and county two-lane highways surround the project area to serve the local traffic flow, including the Natchez Trace Parkway. None of these roads are at capacity.
Public Health	Ambient air quality meets NAAQS standards; annual natural radiological dose is 290 mrem/yr which is insignificant.
Hazardous and Solid Waste	No active onsite disposal area exists and there are no known hazardous wastes onsite. Adequate capacity for waste generation quantities at existing offsite waste disposal facilities.
Noise Conditions	Levels are slightly higher than typical of a medium density rural community; local sources of noise include Highway 9, residential, natural (e.g., insects and tree frogs), and sporadic timber cutting.
Recreation	Major public recreation area is adjacent to Natchez Trace Parkway, including the 200-acre Little Mountain Overlook/Jeff Busby developed area, on the northwestern side of the RHPP site. Primary recreation activity on RHPP site is hunting. Other recreation facilities are available in the surrounding area.
Visual Resources	Harmonious mosaic of rural landscape; some clear-cuts and a few manmade structures (water & radio towers, transmission lines) visible; unique night sky darkness important to nearby Rainwater Observatory and Planetarium. Adjoins visually-sensitive historic landscape of Natchez Trace Parkway.

Environmental Consequences of the Proposed Actions

The effects of constructing and operating the generation facility, lignite mine, and the associated transmission lines and natural gas pipeline are summarized in Table 2. Most environmental impacts associated with the construction and operation of the Red Hills Power Project and its associated ancillary facilities are not expected to be significant. Some of the socioeconomic impacts expected as a result of the construction and operation of the facility are expected to be positive (new jobs, tax payments, etc.).

Cumulative Impacts

The state of Mississippi and Choctaw County have indicated that they intend to cooperate on the development of an EcoPlex industrial park that would be located adjacent to the proposed generation facility. It is contemplated that occupants of the EcoPlex would be designed to share resources with and use wastes from the RHPP in the course of their activities. The proximity of the EcoPlex to the generation facility and its industrial nature means that it is likely that its development and operation would impact environmental resources that are common to resources potentially impacted by the RHPP. These "cumulative" impacts have been assessed in this EIS. There are no other major activities that have been proposed in the area that are likely to have material cumulative impacts with the RHPP.

There would likely be cumulative impacts to air quality in the area. However, applicable federal and state air pollution control requirements would ensure that any such cumulative impacts are kept within acceptable levels. Any major source of air pollution locating in the EcoPlex would have to limit its emissions in a manner to maintain compliance with EPA's ambient air quality standards and Prevention of Significant Deterioration requirements. The estimated cumulative loss of prime farmland soils would be acceptable, based on National Resource Conservation Service guidelines. Cumulative impacts to groundwater, surface water, aquatic ecology, wetlands, floodplains, and rare plants and animals would be negligible. Cumulatively, over 2,000 acres would eventually be converted from forest and agricultural uses to long-term industrial uses. This would constitute an important local impact on plant and animal populations as well as local land use, but would not be important from a state or regional perspective. Area noise levels, highway traffic, and demand for recreational facilities would increase while visibility of the night sky would decrease. The cumulative socioeconomic impacts would be positive through job creation, increased tax collections, and increased property values.

Preferred Alternative

TVA's preferred alternative is to purchase the electricity generated by the RHPP, and to construct the connecting transmission line within Corridor A. The generation facility, lignite mine, and utility connections would be built and operated as described in this document.

By selecting this alternative, TVA would fill a portion of its need for a new, competitively-priced supply of electricity. The project would result in significant local socioeconomic benefits and acceptable environmental impacts.

Regulatory Requirements

Many activities described in this EIS would require review and consultation with other federal and state agencies. Most activities would also require permits and approvals from federal, state, or local agencies. Environmental permitting processes help prevent unacceptable environmental impacts and safeguard important environmental resources. Table 3 lists relevant statutes and Executive Orders.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
4.2 Air Resources	Minor and transient impacts during construction related to land clearing and site preparation (fugitive dust), vehicular traffic, open burning, and internal combustion engine operation would be insignificant and would not lead to violations of any air quality standards. Compliance with air quality permit conditions would assure that air pollutants associated with lignite combustion are not significant. The RHGF stack plume might be visible from the Little Mountain Overlook 25 days/year. Other air quality and visual impacts from facility plumes would be insignificant.	Minor and transient impacts during construction related to land clearing, site preparation, vehicular traffic, open burning, and internal combustion engine operation would be insignificant. Mine operations would have no stationary sources of particulate air emissions. Particulate and exhaust emissions resulting from mining operations would not exceed PSD increments or NAAQS, and are considered insignificant.	Minor and transient impacts during construction related to land clearing, grading, and open burning would be insignificant.
Commitments	• Compliance with applicable federal, state, and local regulations would minimize potential offsite impacts from open burning during construction. • Air emission permit from Mississippi Office of Pollution Control (MOPC) would ensure compliance with all state and federal air quality standards (NAAQS, PSD, NSPS, and NESHAPS).	• Compliance with applicable federal, state, and local regulations would minimize potential offsite impacts from open burning during construction. Operational control measures such as minimizing haul distances, spraying water on roads, and proper reclamation of disturbed areas would reduce the potential for fugitive dust and exhaust emissions.	• Compliance with applicable federal, state, and local regulations would minimize potential offsite impacts from open burning during construction.
4.3 Geology	Loss of sand deposits in the project area would be insignificant. No impacts expected on or from seismicity.	Loss of sand deposits in the project area would be insignificant. Removal of lignite deposits within the 3,800-acre area to be mined represents only a small fraction of the total area over which mineable lignite is present in northeastern Mississippi, and is considered insignificant. Overburden removal would	No impact.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		cause a significant change to current stratigraphy. The postmining topography would be similar to original conditions, but with gentler slopes.	
Commitments	• Adherence to seismic provisions of national model building codes.	• Backfilling and grading to replace the overburden would be contemporaneous with mining. The top four feet of selected overburden material would be non-acid forming, non-toxic forming, and non-combustible materials to create a growth medium that is equal to or greater than the native soils.	• None
4.4 Soils	Construction would impact 390 acres, including 44 acres of the Besa Chitto Creek bottomlands. Impacts from construction erosion would be temporary and can be mitigated as described below. Potential impacts on soils from operations from ash management and parking lot/road runoff can be mitigated as described below and are considered insignificant.	Construction would impact 1,900 acres. Operations would impact 3,800 acres over a 37-year period. 1,834 acres are prime farmland soils, but none are classified as historic cropland. Impacts from construction erosion would be temporary and can be mitigated as described below. The truck/shovel fleet would minimize compaction during reclamation, but a ripper would be used where necessary. Potential impacts to soils in mine area would be temporary and can be mitigated as described below. Where soil reclamation results in improved soils, impacts would be beneficial.	Construction would not adversely impact prime farmland soils. Erosion impacts during construction would be temporary and can be mitigated as described below. Localized, permanent soil compaction resulting from construction would be insignificant. Impacts to 14 acres of hydric soils are discussed in Section 4.8, Wetlands.
Commitments	• Use of Best Management Practices (BMPs) such as silt fences, hay bales, and	• Use of BMPs such as silt fences, hay bales, settling sumps, runoff diversion	• Use of BMPs such as silt fences, hay bales, and revegetation for

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
	revegetation for erosion control. • Construction of stormwater runoff sumps, and proper revegetation to minimize erosion/sedimentation. • Provision of curbed or diked areas around fuel, oil, and chemical storage facilities. • Use of Spill Prevention Control and Countermeasure (SPCC) Plan.	structures, sedimentation ponds, and revegetation for erosion control. • The use of selected overburden materials to create a soil productivity level and slope equal to or better than existing conditions. • Provision of curbed or diked areas around fuel, oil, and chemical storage facilities. • Use of SPCC Plan. • Use of appropriate management procedures for stockpile overburden to control leachate and runoff.	erosion control.
4.5 Groundwater	Shallow groundwater from the Wilcox aquifer would be used for construction purposes. Impacts from these activities are expected to be insignificant. Operations would require 6.33 mgd of makeup-water drawn from the TAS aquifer. Predicted drawdowns in the TAS aquifers would result in small increases in pumping lifts, but no pump modifications. The potential impact of groundwater use on existing and future TAS users, and users of aquifers above the TAS are considered insignificant. The potential for water degradation and possible land subsidence, saltwater encroachment and upconing are considered insignificant.	The effects on groundwater resources from construction activities including groundwater use, excavation, and grading would be insignificant given the limited depth and area of disturbance. 18 wells and springs in and near the mine could be impacted by mine operations; none are public water supplies. These impacts would be mitigated as described below. Impacts of long-term changes in hydraulic properties of the overburden would be insignificant. With the measures described below, acid-forming or toxic materials are not expected to cause significant groundwater quality degradation. No adverse impacts are expected from onsite lignite storage.	No impacts expected from construction. Potential impact from ROW maintenance would be insignificant and can be reduced by the measures listed below.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
Commitments	• Use of sumps, trenches, and dewatering pits during facility construction to control groundwater as needed. • Compliance with the MDEQ Water Supply permits issued for operation of wells in the TAS. • Compliance with MDEQ solid waste disposal regulations.	• Provision of alternative water supply by the MLMC to impacted owners. • Use of special handling techniques for unoxidized overburden known to contain AFM or TFM (per mine permit overburden handling plan). • Construction of anoxic limestone drains or addition of buffering agents should acidic seeps occur.	• Use of EPA-registered herbicides labeled for ROW to be applied by licensed personnel, minimizing public exposure and water resource contamination.
4.6 Surface Water	The facility would function as a zero discharge facility for process waters. Sanitary wastewater would be discharged into an approved onsite septic system. Stormwater would be collected and routed to ponds as required to prevent contamination. Potential impacts to surface water from facility construction and operation can be reduced as described below and are considered insignificant.	Impacts from mining/ reclamation on the hydrologic system would be small and limited to areas immediately adjacent to the mine excavation. Peak flows in Little and Middle Bywy Creeks could be reduced. Some springs and seeps on the mine site would not return, but the flow from these is insignificant. Potential impacts to water quality/quantity can be reduced as described below and are considered insignificant.	Potential impacts from increased sediment loads and runoff quantities and other construction impacts would be temporary and can be reduced as described below.
Commitments	• Maintenance and compliance with NPDES Permit, SWPP Plan, and SPCC Plan. • Use of BMPs in construction and operations.	• Mine permit calls for construction of sedimentation ponds, stream diversions, and erosion control features to protect local surface waters and hydrologic balance. • Approved surface monitoring program and overburden handling plans would be implemented. • If significant acidic seeps occur, anoxic limestone drains and/or other neutralizing features could	• Use of project-specific BMPs and daily work procedures.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		be put in place. • Compliance with applicable effluent limitations (NPDES Permit, SWPP Plan, and SPCC Plan). • Reclamation activities including permanent impoundments and restoration of streambeds, and approximate drainage patterns. • Use of BMPs in construction and operations. • Provision of alternative water supply by the MLMC to owners as needed.	
4.7 Aquatic Ecology	Runoff and sedimentation from construction activities would be insignificant. No adverse impacts are expected from generation facility operations.	Potential runoff and sedimentation from disturbance can be mitigated as described below. Adverse impacts from increased suspended solids and nutrient loading would be short-term and localized. Diversion of onsite streams to new, unshaded channels would temporarily impact aquatic life. This would be somewhat offset by the creation of new habitats in diversion streams and sedimentation ponds in listed mitigation.	There would be temporary impacts during construction associated with erosion and sedimentation. These impacts are not considered to be significant. Impacts to aquatic life from operations and maintenance would be insignificant.
Commitments	• Use of BMPs during construction including fabric filter fences, hay bale dikes, and sedimentation ponds during construction. • Stormwater runoff would be managed in accordance with the SWPP Plan.	• Use of BMPs during construction and operation including fabric filter fences, hay bale dikes, and sedimentation ponds during construction and operation. • Stormwater runoff would be diverted to the mine site sedimentation ponds by diversion ditches or in accordance with SWPP	• Use of BMPs for utility corridor maintenance and project-specific BMPs and daily work procedures.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		Plan. • Reclamation activities including permanent impoundments and restoration of streambeds, revegetation, and approximate drainage patterns.	
4.8 Wetlands	3.58 acres of wetlands would be eliminated during facility construction. This impact can be mitigated as described below. No impacts from operations are expected.	63 acres of wetlands would be eliminated by grading and clearing activities for construction and operation of the mine. However wetland functions would return over time. Additional wetlands would be created as a result of mining activities.	Minor impacts to wetlands during construction would result from clearing of tall vegetation and temporary soil disturbance. Some loss of value of impacted wetlands due to conversion from forested to emergent or scrub-shrub wetland types.
Commitments	• Mitigation of wetlands would be in compliance with the COE permit as documented in the individual permit.	• Mitigation of wetlands would be in compliance with the COE permit and in accordance with the mine permit. Additional wetlands would be created.	• Avoidance of wetlands in transmission line routing to the extent possible. • Use of project-specific BMPs and daily work procedures.
4.9 Floodplains	No impact to floodplains are expected to result from either construction or operations of the facility.	Impacts from construction and operation of the mine are expected to be insignificant. Some benefit would be realized due to flood retention capability of sedimentation ponds.	Construction of transmission lines and the natural gas pipeline would temporarily impact the floodplain. No operational impacts are expected.
Commitments	• Adverse floodplain impacts would be minimized through project design and using BMPs during construction.	• By returning affected areas to premining conditions, as provided for in the mine permit, adverse floodplain impacts would be minimized.	• The natural gas pipeline would be constructed completely underground and the impacted area would be returned to pre-construction conditions. • TVA's BMPs would be used for transmission line construction and maintenance. • ROW would be

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
			revegetated where natural vegetation is removed.
4.10 Terrestrial Ecology	Loss of common plant communities and animal habitat from the 390-acre site is not expected to have significant impacts to the state or region. Some deep ravine and habitats could be impacted during construction. No significant impact to vegetation is expected from the operation of the facility. Impacts on wildlife from operating noise would be insignificant.	The temporary and/or permanent loss of common plant communities and animal habitat from the 300-acre mine facility construction area is not expected to have significant impact on the state or region. Operation of the mine is expected to destroy most site vegetation. In particular, the uncommon habitats are not expected to reoccur. Except for the uncommon vegetation, the incremental loss of this vegetation over the 37-year life span of the mine is not expected to have negative impacts to the vegetation of the state or region. Loss of diversity of habitat may reduce plant and animal species diversity, locally and temporally.	No significant impacts would be expected. Maintenance of the transmission lines and natural gas pipeline ROWs would result in the perpetuation of early successional plant communities. This is not expected to have a significant impact to the state or region.
Commitments	• Facility design features to maintain regulatory noise levels. • Buffering with trees near facility boundaries as required.	• Specific reclamation activities as stated in the mine permit application, guided in-part by landowner preference. This includes creation of habitat diversity. • Efforts would be made to avoid or relocate unique habitats to the extent practicable.	• Use of BMPs for construction. • Establishment of riparian buffer zones along ROW crossing streams.
4.11 Threatened or Endangered Species	Construction and operation of the RHPP would have no effect on federally-listed species or proposed species, since none occur in the area. Loss of the state-listed rare plant population found onsite could be minimized by the mitigation listed.	Construction and operation of the RHPP would have no effect on federally-listed species or proposed species, since none occur in the area. Loss of six state-listed rare plant and three wildlife habitats found onsite could	Utility corridors would be surveyed for listed species in the Spring of 1998. Based on surveys elsewhere in the area, no federally-listed species are expected to occur.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		be minimized by the mitigation listed.	
Commitments	• To the extent practicable transplant the state-listed plant population to a protected area prior to construction.	• Specific reclamation activities as stated in the mine permit application, guided in-part by landowner preference. • Creation of habitat diversity for, and either avoidance or transplantation of, state-listed species to a suitable protected site to the extent practicable.	• Impacts to federally-listed species in corridors would be avoided in final line routing. • Impacts to state-listed species in corridors would be avoided where practicable.
4.12 Land Use	Construction and operation of the generation facility would affect land use on about 390 acres. This would result in conversion of about 322 acres of forestland and 66 acres of pasture and cropland to industrial use, and two acres for other uses. Eleven structures, including five residences, and three small ponds could be removed. Indirect impacts include business and housing development which would likely occur if the project proceeds. However, this development is expected to be limited.	Construction and operation of the mine and mine support facilities would affect land use on 5,800 acres over 37 years. 85.3% of the mine area is forestland. About 40 residences and less than 10 other structures would be removed. Impacts would last for at least eight to nine years from initial clearing activity through reclamation and final bond release. This represents a short-term potential income loss to the landowner. However, the landowner would receive mineral royalties and surface damage payments. (See Socioeconomic Section.) The mine permit application identifies a number of mitigation measures that the mine operator would implement. The impact on the value of timber resources would be beneficial, with an estimated increase in net future value of $45/acre.	Construction and operation of the transmission lines would require the removal of approximately 114 acres of timber valued at $74,000 within the ROW. Construction of the natural gas pipeline, which follows the transmission line ROW, would require an additional 75 feet at the edge of the ROW. Most land uses could resume after construction except for forestry along the utility ROW. Operational impacts from the utility lines would result in long-term but regionally insignificant reductions of forestland.
Commitments	• None	• Mining regulations require that the soil productivity of	• None

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		reclaimed areas be at least equal to or greater than prior to mining. • The mine permit application calls for reclamation activities that would restore land to the land use choice of the surface landowner. However, the majority of the proposed postmining land use has been designated as commercial forestry, interspersed with fish and wildlife features. • Some recreational land use could be created due to the possible permanent retention of the water control pond.	
4.13 Cultural and Historic Resources	No adverse impact expected from construction or operation. No historic or archeological sites listed or eligible for inclusion on the National Register of Historic Places occur in the vicinity. Ambient air emissions from facility operations are not expected to adversely impact downwind historic structures.	The first five years of mine activities could impact seven archeological sites potentially eligible for the National Register of Historic Places. Later mine activities could impact one cemetery.	After the utility corridors are identified, they would be surveyed and the results reported in the FEIS. In coordination with the MSHPO, any adverse impacts would be mitigated as indicated.
Commitments	• None	• Any sites determined to be eligible for the Register would either be avoided or any adverse impacts would be mitigated. Mitigation would consist of Phase III data recovery as approved by MLMC, TVA, MSHPO, and the Advisory Council on Historic Preservation as detailed in the proposed Programmatic Agreement (PA). • Surveys would be conducted for any areas to be disturbed outside of the	• Any sites determined to be eligible for the Register would either be avoided or any adverse impacts would be mitigated.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
		five-year mine area, also as provided for in the PA. • The cemetery would be avoided.	
4.14 Socioeconomics	Employment during construction would average 750, with a three-month peak employment of 1,500. An estimated one-half of the 750 workers would commute; the rest would move within commuting range. RHGF would employee 39 workers. These projected increases are expected to have an insignificant impact on housing, water supply, sewer, health facilities, and crime. Impacts would be beneficial to local government revenues and land values. Two school systems, some fire protection services, and some local law enforcement systems may experience temporary impacts during construction.	Employment during construction would average 112, with a five-month peak employment of 150. An estimated one-half of the workers would commute, the rest would move within commuting range. Mine operation employment would average 131. These projected increases are expected to have an insignificant impact on housing, water supply, sewer, health facilities, and crime. Impacts would be beneficial to local government revenues and land values. Two school systems, some fire protection services, and some local law enforcement systems may experience locally significant impacts.	No impacts are expected.
Commitments	• Work with the area advisory groups to determine how best to mitigate any impacts. • Where practicable, hire local employees and make local procurements. • Would implement safety training programs. • Permit available water supply for fire protection onsite. • Would provide fire training programs to facility employees.	• Where practicable, hire local employees and make local procurements. • MLMC would implement extensive safety training programs. • MLMC would provide EMT training to mine employees. • Permit available water supply for fire protection. • MLMC would provide extensive fire training programs to mine employees.	• None
4.15 Environmental Justice	The proportion of minority, lower income, and aged population are all less in the project area than in Choctaw County and/or in the	The proportion of minority, lower income, and aged population are all less in the project area than in Choctaw	The proportion of minority, lower income, and aged population are all less in the project area

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
	State. Therefore no impact is expected.	County and/or in the State. Therefore, no impact is expected.	than in Choctaw County and/or in the State. Therefore, no impact is expected.
Commitments	• None	• None	• None
4.16 Transportation	Impacts to rail or air transportation would be insignificant. Traffic impacts from operations would be insignificant with only slight reductions in levels of service on nearby roads. Impacts from annual maintenance outages would be short-term and transitory. During peak construction periods, levels of services would be more substantially impacted but this would be temporary.	Impacts to rail or air transportation would be insignificant. Impacts to roads from construction and operation would be insignificant. Mine operations would result in closing and/or relocating several county roads over the life of the mine. During peak construction periods, levels of services would be more substantially impacted but this would be temporary.	Impacts of construction of the natural gas pipeline on local roadways would be temporary and could be mitigated as indicated below. Impacts from construction and maintenance of the transmission lines would be insignificant.
Commitment	• Stage delivery of large equipment during non-peak traffic hours. • Control traffic as required. • Discourage employees from commuting on Natchez Trace Parkway. • No truck deliveries via Natchez Trace Parkway.	• Road closure and alteration plans would be reviewed by the Choctaw Co. Board of Supervisors for approval. • Public roads would be reconstructed in their original location or a more suitable location as approved by the county. All roads would be rebuilt to existing standards or better. • Surface owners would retain access to lands, although access to land being mined would be controlled by MLMC for safety purposes. • Discourage employees from commuting on Natchez Trace Parkway. • No truck deliveries via Natchez Trace Parkway.	• Construction of the natural gas pipeline would be overseen by the MS Public Service Commission Division of Pipeline Safety to minimize any possible impacts.
4.17 Public Health	For construction, limited impacts are expected on emergency medical response. No operational impacts are	For construction, limited impacts to emergency medical response. For operations, limited	No impacts to public health through increased exposure to EMF or impacts to emergency

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
	expected on emergency medical response. Two hazardous materials would be present during operations—gaseous chlorine and natural gas. These present limited potential for adverse impacts for toxic gas or vapor release. Radiological impacts of operations are insignificant.	impacts to emergency medical response and from air pollutants are expected.	medical response are anticipated.
Commitments	• Coordinated emergency medical services planning. • Compliance with NAAQS regulations.	• Coordinated emergency medical services planning.	• None
4.18 Hazardous and Solid Waste	Only limited quantities—less than 220 lbs/month—of hazardous waste would be generated during construction and operating phases of the generation facility. The risks associated with these wastes can be lessened as described below. Potential Impacts from non-hazardous solid waste (notably ash) are not expected to be important and can be reduced by the measures listed below.	Only limited quantities—less than 220 lbs/month— of hazardous waste would be generated during construction and operation phases of the lignite mine. The risks associated with these wastes can be lessened as described below.	No impacts from hazardous waste or solid waste are expected.
Commitments	• Use of strict chemical storage and safety programs. • Compliance with applicable OSHA regulations. • Registration with EPA as a Conditionally Exempt Small Quantity Generator or Small Quantity Generator. • Manage hazardous waste in accordance with applicable RCRA regulations. • Design and construction of ash management unit in accordance with MDEQ permit. • Maximize beneficial use of ash. • Implementation of applicable Pollution Prevention Plan.	• Use of strict chemical storage and safety training programs. • Registration with EPA as a Conditionally Exempt Small Quantity Generator or Small Quantity Generator. • Hazardous waste would be managed in accordance with applicable RCRA regulations. • Implementation of the mine permit application requirements for waste management. • Implementation of applicable Pollution Prevention Plan.	• Proper disposal of all wastes.
4.19 Noise	No hearing loss or speech	No hearing loss or speech	No hearing loss or

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
	intelligibility impact on residents from noise is expected during construction or operations. Other impacts from noise are expected to be insignificant.	intelligibility impact on residents from noise is expected during construction or operations. Other impacts from noise are expected to be insignificant.	speech intelligibility impact on residents from noise is expected during construction. Other impacts from noise are expected to be insignificant. Impacts from maintenance of transmission line and natural gas pipeline corridors is expected to be local, short-term, and insignificant.
Commitment	• Limit construction activity as much as practicable to the daytime hours. • Design generation facility features to maintain regulatory noise levels. • Buffer with tree plantings near facility boundaries as required.	• Design activities to minimize noise to extent practical.	• None
4.20 Recreation	No loss of general public recreation opportunities would occur, because all property is privately owned. Impacts to general public recreation from permanent employees would be insignificant. Construction and operational impacts on hunting clubs would be insignificant. The sights and sounds of construction could impact recreation, but such impacts can be mitigated as described below.	No loss of general public recreation opportunities would occur, because all property is privately owned. Construction and operational impacts on hunting clubs would be insignificant. The sights and sounds of construction could impact recreation, but such impacts can be mitigated as described below. Recreational uses would improve if water control ponds are retained after mining.	No impacts.
Commitments	• As listed in Sections 4.19 and 4.21.	• As listed in Sections 4.19 and 4.21.	• None
4.21 Visual Resources	Some significant impacts—lighting and destruction of vegetation—from construction and operation would occur. These impacts would be localized and temporary. These potential impacts can be	Some significant impacts—lighting and vegetation removal—from construction and operation of the mine would occur. These potential impacts can be mitigated as	Clearing the ROW for the transmission lines and natural gas pipeline would impact the visual landscape.

Table 2 Summary of Effects of Proposed Action (Commitments include permits, licenses, and agreed upon mitigation)

Resource/ Commitments	Red Hills Generation Facility	Red Hills Lignite Mine	Transmission Line and Natural Gas Pipeline
	mitigated as described below.	described below. There would be few long-term visual impacts from the mine operation.	
Commitments	• Commit to use "dark sky" lighting as practical. Use shielded low-pressure sodium lighting. • Minimize installation of lighting fixtures. • Implement operational plans that minimize lighting. • Use dual stack lighting system in accordance with FAA Advisory Circular AC 70/7460-IJ. • Retain dense vegetative buffer around the ash management unit. • Use flat color in the medium cool-gray range for the exterior of the facility. • Use of tree plantings and landscaping to minimize impacts around facility.	• Commit to use "dark sky" lighting. • Mine reclamation activities as detailed in the mine permit, including: ◊ Work with the NPS on management of foreground vegetation along Parkway. ◊ Control discharges to achieve no perceptible difference in water quantity or quality under the Parkway. ◊ Control fugitive dust emissions with two 12,000-gallon water trucks. ◊ Train employees to be sensitive while working near Parkway. • 2,000-foot set back of lignite recovery operations from the Natchez Trace Parkway to provide vegetation screening. • Keep the dragline low in the pit to limit its visibility.	• After construction, the transmission lines and structures would affect a permanent change in visual landscape. • Maintenance of both the transmission line and natural gas pipeline ROW would add to the visual impact.

Table 3 Relevant Environmental Authorities

Statute
Archaeological and Historic Preservation Act of 1974 (16 U.S.C 469)
Clean Air Act, as amended (Public Law 88-206)
Clean Water Act, as amended (Public Law 95-217)
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Public Law 96-510), as amended by the Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499)
Emergency Planning and Community Right-to-Know Act of 1986 (42 USC 11001 et seq.)
Endangered Species Act of 1973, as amended (Public Law 93-205)
Farmland Protection Policy Act of 1984 (7 U.S.C. 1539-1579)
Federal Aviation Act (49 U.S.C. 1304 et seq.)
Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661, et seq.)
Mine Safety and Health Act (Public Law 910173 as amended by P.L. 95-164)
Mississippi Solid Waste Act (Mississippi Code, 1972, Sections 17-17-1 et seq., as amended)
Mississippi Water Rights Act (Mississippi Code, 1972, Section 51-3-1 et seq., as amended)
Mississippi Water Laws (Mississippi Code, 1972, Section 51-3-39 et seq., as amended April 1, 1985)
Mississippi Surface Coal Mining and Reclamation Law, Section 53-9-1, et seq., as amended
National Environmental Policy Act of 1969 (Public Law 91-190)
National Historic Preservation Act of 1966, as amended (Public Law 89-665)
Noise Control Act of 1972, as amended
Occupational Safety and Health Act of 1970 (Public Law 91-956, as amended)
Resource Conservation and Recovery Act (Public Law 94-580)
Rivers and Harbors Act of 1899
Safe Drinking Water Act, as amended (Public Law 93-523)
Solid Waste Disposal Act of 1965, as amended
Surface Mining Control and Reclamation Act of 1977, as amended
Toxic Substances Control Act of 1976 (Public Law 94-469)
Watershed Protection and Flood Prevention Act of 1954 (16 U.S.C. 1101, et seq.)
Wetlands Conservation Act (Public Law 101-233)
Executive Order
Floodplain Management (Executive Order 11988)
Protection of Wetlands (Executive Order 11990)
Federal Compliance with Pollution Standards (Executive Order 12088)
Environmental Justice in Minority Populations and Low-Income Populations (Executive Order 12898)